BIM FAQs

Cabinet Office head of BIM implementation David Philp explains why SMEs should get on board with BIM, offering his top five tips and answering some common industry questions on adoption.
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Ensuring SME whole-sector adoption of building information modelling is fundamental to the success of the Government Construction Strategy’s 2016 BIM objective – a goal we believe is very achievable over the next four years.

The BIM value proposition of improved efficiency is undoubtedly scaleable (from a new-build school to a kitchen replacement, from road repairs to a prison refurbishment) and affords many prizes for an SME, irrespective of their position in the construction landscape. As an intelligent client, we want to be good at procuring not just our physical assets but also how we strategically procure and use open asset information.

Delivering much of this digital information, 3D models and more importantly the non-graphical asset data requirements, will be down to the supply chain.

We will, however, offer clear and simple guidance to industry, but the A to B around that process will largely be driven by the supply chain, driving UK BIM innovation and industry know-how.

While the BIM ‘how’ resides on the supply side and you will have your unique BIM challenges, we would like to take this opportunity to offer some lessons learned to date.

1) Start now

Mark Twain offers some great advice: “The secret to getting ahead is getting started. The secret to getting started is breaking your complex, overwhelming tasks into small manageable tasks, and then starting on the first one.”

This is particularly true in terms of BIM implementation – it’s not a fad, it’s real and it’s now. You cannot afford to wait until 2016; the early adopter departments have already started their BIM embarkation – can you really afford to miss out?

2) Don’t believe the ‘BIM wash’

The newly coined term ‘BIM wash’, is essentially an exaggeration of what BIM can do, or, of even more concern, it inflates what needs to be done to done for successful government Level 2 adoption, frequently involving an equally inflated fee.

Avoid the ambulance chasers. The reality is BIM has the potential for your company to unlock more efficient ways of collaborative working and will offer better value to your customers (both public and private).

You cannot buy BIM out of a box, and the truth is you may be required to make a technology investment (the government is not mandating any specific software platforms) but BIM is very much more than technology; it is a new way of working, and you will need to invest more in doing than buying.

Concentrate on your people (raising BIM awareness/training) and process (managing and using asset information). Rather than paying expensive fees, a great place to get started is our website (www.bimtaskgroup.org) where you will find lots to content that is contextualised to our Level 2 programme.

Understand your role in the process – irrespective of what your business does, you will be supplying and managing information, so get to know the key reference points: COBie UK 2012, PAS1192-2:2012.

3) Discover your regional hub

Regional BIM hubs are being created by the Construction Industry Council, which will be launched in Autumn 2012. These hubs will offer (without cost) impartial advice on the government BIM requirements. More information can be found at www.bimtaskgroup.org/bim-regional-hubs.

4) Information management and simple goals are essential

The BIM process is very much about creating, collating, managing and using digital data in a collaborative environment across a client’s entire project lifecycle.

Make sure you are clear on who manages data within your organisation. What governance do you currently apply for information management and will this need to change?

When it comes to your overall BIM project strategy, keep your goals simple. The BIM Task Group has been helping government departments create their BIM strategies and goals. At a departmental level it is as simple as a handful of data drops at key decision points in the asset lifecycle.

Establish your BIM vision and set specific measurable goals (eg ‘we will have trialled two Level 2 compliant pilot projects by the end of 2013’). Your first BIM project is likely to bend a few nails, so ensure you’re also looking beyond your inaugural project.

5) It’s all about people

When all is said and done, effective BIM implementation is all about people working together in a collaborative environment supported by the digital technology. Winning hearts and minds and breaking the heuristic bias of ‘we’ve always done it that way’ will probably be your biggest challenge.

Identify your agents for change, educating them on the BIM value proposition. Let them join the dots with others, especially your own supply chain, and get started. From that point on, everything will change.

BIM FAQs

Alongside the aforementioned lessons we have learned so far, a number of fundamental frequently asked questions have arisen.

What is BIM?

There are many definitions of what BIM is and in many ways it depends on your point of view or what you seek to gain from the approach. Sometimes it’s easier to say what BIM isn’t:

• It’s not just 3D CAD;
• It’s not just a new technology;
• It’s not next-gen; it’s here and now.

BIM is essentially value-creating collaboration through the entire lifecycle of an asset, underpinned by the creation and exchange of shared 3D models and intelligent, structured data attached to them. We have been explicit in asking for
Level 2 BIM in the maturity ramp; this is defined as file-based collaboration and library management.

Crudely defined, Level 2 is a series of domain specific models (for example, architectural, structural, services, etc) with the provision of a single environment to store shared data and information – in our case COBie UK 2012.

How do you use it?
Other than a digital toolset, you don’t actually use BIM; it is way of working, it’s what you do: information modelling and information management in a team environment.

The rich 3D experience; digital simulations; rehearsals of all stages of the design, build and operate process; and the information within the models facilitate well-informed decision-making, resulting in better business outcomes, clarity, improved communication, de-risking and ultimately better efficiency.

“Other than a digital toolset, you don’t actually use BIM; it is a way of working.”

Why is it relevant to SMEs?
The Government Construction Strategy and its BIM intervention is far-reaching (there is no minimum value on a BIM-enabled project).

You may be involved either directly through engaging with a government department or indirectly with a supply chain partner who is and needs data as part of their contractual requirements. So no matter what your role in the built environment, it is highly likely your business will be involved in the BIM process, either through supplying or managing data.

We are also starting to see BIM ‘pull’ from private sector clients. Many partners, such as BIM for Retail, are working with us to ensure a consistent message to the supply chain.

How much will it cost?
We are asked this question a lot; however, we think this should be reframed as either ‘what’s the cost to my business if we don’t do it?’ or ‘what is the typical return on investment if you implement BIM?’

The cost of BIM implementation is proportional to what outcomes you want to achieve from BIM. If treated as a business change programme, the principal cost will be in staff time, BIM awareness and training, etc. The inconvenient truth is that you are likely to need some new digital tools; however, again the cost of this will depend on what you need to do with modelling, data creation or management. Most BIM design review tools are free.

Typically, BIM authoring tools, depending upon complexity, will be around the same as price (depending where you live in the UK) a pint and half of beer a day.

Will SMEs win more work through using it?
In the short term, yes, BIM could be a differentiator at tender stage. However, it is likely that in the longer term the need for BIM-enabled bids to demonstrate solution optimisation and de-risking will be derogue.

How much more money could businesses make from using it?
BIM, if successfully implemented, will help organisations strip the waste from their processes, which in many cases could be in the bandwidth of 20-30 per cent. This can be achieved by designing and building the asset virtually, once, twice, until it can be built once flawlessly.

This whole-sector approach to BIM will bring additional opportunities in the form of exploiting existing and new export markets for UK construction know-how and BIM ready products.

The international consultancy market is highly competitive and it is important that UK companies remain ahead of the game in terms of new technology, approaches and the way we work.

The additional collateral effect of widespread adoption of BIM in the UK construction sector is that it presents a big opportunity for domestic niche software developers and offshore manufacturers.

BIM is an innovative method and one that has potential for truly global exploitation. Our four-year strategy for BIM implementation puts the UK in vanguard of that exploitation.

REGULATION SHORTCUT

The issue: BIM – a legal risk for SMEs?

It was perhaps predictable the government’s announcement last year that its supply chain would be required to use BIM by 2016 would cause consternation among smaller or medium-sized consultancies/contractors, when pitched against the financial might of the bigger players.

Surely purchasing the software, training staff and integrating the use of BIM into everyday working practices was only ever going to be within the remit of multinational organisations? However, such a view ignores the fact that we are dealing with a sector that specialises in the technically innovative, and often their response to the changing face of the industry is more rapid.

The legal implications of BIM are currently a discussion point, although at this early stage perhaps overplayed. The good news is it is not at all convincing that we need to start re-thinking the basics, and therefore spend vast amounts on legal fees.

The fully collaborative 3D model (Level 2 BIM) which is what the government has targeted for 2016, while representing a change in working methods, does not appear to affect the fundamental legal principles that apply where 3D Cad or, dare I say it, even 2D drawings are used.

Level 3 BIM, which is a single integrated database accessible to all of the professional team that includes cost and programming elements, is arguably where the issues of intellectual property, ownership and risk management will need specific attention, but this is clearly some way off.

What is obviously important at present is to acknowledge the role of BIM in a project and to include a protocol for its status and use in your contracts, an example of which is helpfully provided at Schedule 20 of the BIM Working Party Strategy Paper dated March 2011 and which can be viewed online for free.

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